

COMMITTEE ON WAYS AND MEANS

SUBCOMMITTEE ON TRADE

SUBCOMMITTEE ON OVERSIGHT

SUBCOMMITTEE ON SOCIAL SECURITY



Congress of the United States
House of Representatives
Washington, DC 20515-4708

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April 2, 2009

The Honorable David Obey
Chairman
House Appropriations Committee
H-218, The Capitol
Washington, DC 20515

The Honorable Jerry Lewis
Ranking Member
House Appropriations Committee
1016 Longworth House Office Building
Washington, DC 20515

Dear Chairman Obey and Ranking Member Lewis:

I am requesting funding in the FY 2010 Defense bill, US Marine Corps: Joint Non-Lethal Weapons Directorate (JNLWD), RDT&E R-1/PE #0603651M; P-1/Line #21 Account for Stellar Photonics, LLC to fund the Dynamic Eye-Safe Imaging Laser (DESIL). The entity to receive funding for this project is the Stellar Photonics, LLC, located at 14797 NE 95th Street, Redmond, WA 98052. It is my understanding that the funding would be used to improve the capabilities of the non-lethal Plasma Acoustic Shield System (PASS) in terms of making it safer on the eyes and increasing the range, higher repetitions, and coverage area. The PASS system can be used at check points for riot control and to visually intimidate opponents from entering a restricted area. I certify that neither I nor my spouse has any financial interest in this project.

I hereby certify that this request will be made publicly available on my Official Website as required by Chairman Obey's new Committee policy that only posted requests will be considered.

Consistent with the Republican Conference's policy on project requests, I hereby certify that to the best of my knowledge this request: (1) is not directed to an entity or program that will be named after a sitting Member of Congress; (2) is not intended to be used by an entity to secure funds for other entities unless the use of funding is consistent with the specified purpose of the earmark; and (3) meets or exceeds all statutory requirements for matching funds where applicable. I further certify that should this request be included in the bill, I will place a statement in the Congressional Record describing how the funds will be spent and justifying the use of federal taxpayer funds.

Sincerely,

DAVID G. REICHERT
Member of Congress



OFFICE OF CONGRESSMAN DAVE REICHERT (WA-08)

PROJECT REQUEST CERTIFICATION

By submitting this request for federal funding, I certify that:

- This project directly benefits the residents of Washington's Eighth Congressional District and merits federal funding assistance.
- None of the funds requested will be used for a new building, program, or project named after a sitting Member of Congress.
- None of the funds requested will be used to secure funds for other entities unless the use of funding is consistent with the specified purpose of the project request.
- For requests where the receiving entity is not a unit of federal, state, or local government, or where the entity receiving the funding will not be providing support to a federal, state, or local government, or will not be providing research, the organization will provide matching funds, including in-kind contributions of 5% or more above the statutory requirement.
- For requests from non-federal, -state, or -local government entities or other public institutions, the organization will submit an End User Letter(s) of Support from a public official representing the direct beneficiaries of the project. This will be inserted into the Congressional Record and disclosed on the Member's Congressional Website.
- Under separate cover, I agree to provide a comprehensive plan outlining the sources of funding for the duration of the project; the percent and source of required matching funds, anticipated sources of the funding for the duration of the project, and a detailed budget for how federal funding assistance will be used to support the project.
- In the interest of transparency, any information submitted with this project request may be disclosed for public review, including but not limited to the Committee or Member's Congressional Website and the Congressional Record.
- Should the project receive federal funding, I agree to disclose whether I hired a lobby firm; if so, the name of the lobby firm; and how much was paid to advocate for this project.

PROJECT NAME: Dynamic Eye-Safe Imaging Laser (DESIL)

NAME OF PERSON CERTIFYING: W. Alexander Long

TITLE OF PERSON CERTIFYING: VP & Co-Founder

LEGAL NAME OF ENTITY MAKING REQUEST: Stellar Photonics, LLC

LEGAL ADDRESS OF ENTITY MAKING REQUEST: 14797 NE 95th Street, Redmond, WA

SIGNATURE:

DATE: 03/27/2009

OFFICE OF CONGRESSMAN DAVE REICHERT (WA-08)

CONGRESSIONAL SITE VISIT CERTIFICATION

In the interests of accountability and transparency, we require that either the Congressman or a member of the Congressman's professional staff visit each project site requesting federal funding. This will enable our office to more thoroughly assess the merits of each project and ensure that limited taxpayer funds are invested wisely.

Upon completion of the congressional site visit, please complete this form and have a representative from the organization (not a representative from a lobbying firm) sign it. The Congressional Staff Member visiting the site will be responsible for collecting the form at the time of the visit.

I hereby certify that on March 23rd, 2009 Congressman Dave Reichert/a professional staff member from Congressman Dave Reichert's office visited our organization/project for the purposes of reviewing our request for federal funding.

PROJECT NAME: Dynamic Eye-Safe Imaging Laser (DESIL)

DATE OF CONGRESSIONAL VISIT: 03-23-2009

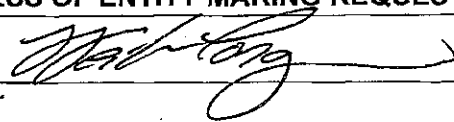
NAME OF PERSON CERTIFYING: W. Alexander Long

TITLE OF PERSON CERTIFYING: VP, Co-Founder

LEGAL NAME OF ENTITY MAKING REQUEST: Stellar Photonics, LLC

LEGAL ADDRESS OF ENTITY MAKING REQUEST: 14797 NE 95th Street, Redmond, WA

SIGNATURE:



DATE:

3/25/2009

MEMBER/CONGRESSIONAL STAFF MEMBER:

SIGNATURE:

DATE:



UNITED STATES MARINE CORPS
JOINT NON-LETHAL WEAPONS DIRECTORATE
3097 RANGE ROAD
QUANTICO, VIRGINIA 22134-5100

March 27, 2009

Stellar Photonics, LLC
14797 NE 95th Street
Redmond, WA 98052

To Stellar Photonics LLC (Ms. Ingrid Fuhriman)

The Joint Non-Lethal Weapons Directorate (JNLWD) supports Stellar Photonics, LLC's request for appropriation in the FY2010 Department of Defense Appropriations Bill for the development of a 1.55 microns (a retina-safe wavelength) laser system. I am aware that Stellar Photonics has made some progress at 1.55 microns which bodes well for the successful completion of this project.

We are currently developing non-lethal weapons which employ this special type of ultra-short pulse lasers systems. Given that this non-lethal technology is very new, the US industry-base is not very large. It would be beneficial to the US Government to fund a limited number of US industry partners to develop this new non-lethal weapon technology.

The JNLWD is confident that Stellar Photonics can leverage their existing laser work performed for the US Army to support this new non-lethal technology. This new non-lethal technology has many useful military and non-military applications.

I feel confident that Stellar Photonics, with the appropriate additional funding, can complete development of such a system and therefore I ask you to consider supporting the Stellar Photonics request for FY10.

A handwritten signature in black ink, appearing to read "David B. Law".

David B. Law
JNLWD Technology Division Chief
703-432.0900

Stellar - Appropriations - (FY2010) - Budget - 8.0 (03-27-2009)

1	Name of Contractor	Stellar Photonics, LLC						
2	Home Office Address:	14797 NE 95th Street	206.979.5511 TEL					
3	Location where work will be performed:	Redmond, Washinton 98052	206.374.8123 FAX					
	Locations:	Stellar Photonics (Lab)	Redmond, Washington					
4	Title of Project effort:	Dynamic Eye-Safe Imaging Laser (DESIL)						
5	Company's TIN & CAGE:	91-2167623	3CZW6					
6	Line Number & Title	21	Joint Non-Lethal Weapons Technology Development					
7	Total dollar amount of the proposal:	<table border="1"> <thead> <tr> <th>CY 2010</th> <th>CY 2011</th> <th>FY 2010 Total</th> </tr> </thead> <tbody> <tr> <td>2,027,225.60</td> <td>1,832,076.83</td> <td>3,859,302.43</td> </tr> </tbody> </table>	CY 2010	CY 2011	FY 2010 Total	2,027,225.60	1,832,076.83	3,859,302.43
CY 2010	CY 2011	FY 2010 Total						
2,027,225.60	1,832,076.83	3,859,302.43						
8	Direct Material Costs							
	a. Purchased parts	505,545.00	505,545.00					
	b. Subcontracted Items	-	-					
	c. Other	-	-					
	(1) Raw Material							
	(2) Standard Commercial Items							
	(3) Interdivisional transfers							
9	d. Total Direct Materials	505,545.00	505,545.00					
10	Material Overhead (rate%) x total direct material = dollars	-	-					
11	Direct labor (Employees)							
	a.							
	Type of labor	Individual	Hrs. 2010					
	Senior Research Engineer	Michael Challenger	730					
	Senior Research Scientist	David Shernwell	1,000					
	Control Systems Engineer	Don Limut	1,020					
	TBD	TBD						
	TBD	TBD						
	b.							
	Total Estimated Direct Labor	2,750	2,575					
12	Special Testing							
13	Special Equipment							
14	Travel							
	a. Transportation	4,867.37	3,973.63					
	b. Per diem or subsistence / lodging	5,391.46	4,002.26					
	c. Other - conference fees	1,445.00	-					
	d. Estimated total travel	11,703.83	7,975.89					
15	Subcontracts							
	a.							
	Type of Subcontracts	Individual/Company	Hrs. 2010					
	Co-Principal Investigator	ORCA Photonics	1,080					
	Technical Engineering	IDS Designs	490					
	Senior Research Advisor	Alan Hoffman	60					
	b.							
	Total Estimated Subcontracts	1,630	1,045					
16	Other Directed Costs (General Equipment)							
17	Total Estimated Direct Costs	898,850.83	812,323.89					
18	General & Administrative Expenses	114.80%	of Direct Costs					
	(as approved by DCAA)	1,031,840.21	932,511.19					
19	Total Estimated Direct Costs & G&A Expenses	1,930,691.04	1,744,835.08					
20	Royalties							
21	Fee	5.00%	96,534.55					
22	Total Estimated Cost and Fee	2,027,225.60	1,832,076.83					
23	a. Has any executive agency of the United States Government performed any review of your accounts or records in connection with any other government prime contract or subcontract within the past 12 month?	YES						
	b. Will you require the use of any government property in the performance of this proposal? If yes, identify.	NO						
	c. Do you require government contract financing to perform this proposed contract?	NO						
24	Type of contact proposed, either cost-plus-fixed fee or firm-fixed price	Firm Fix Price (FFP)						

CY2010 Plasma Shield: Eyesafe Laser Energy Scaleup

Qty	Description	Vendor	Model	Price	Extension
6	Pump Diode Stacks, 10 Bar	QPC Laser	-	\$36,000	\$216,000
3	Diode Power Driver	ILX Lightwave	-	\$9,400	\$28,200
2	Diode Temperature Controller	ILX Lightwave	-	\$4,500	\$9,000
2	Pump matching optics	custom	-	\$6,500	\$13,000
1	Lot, special resonator optics	TBD	-	\$20,000	\$20,000
3	6mm RDA Q-Switch+driver	Quantum Tech	-	\$8,500	\$25,500
6	Laser Crystals	Scientific Materials	-	\$1,230	\$7,380
					\$319,080

CY2011 Active Laser Surveillance

Qty	Description	Vendor	Model	Price	Extension
8	Pump Diode Stacks, 6 Bar	QPC Laser		\$24,000	\$192,000
4	Diode Power Driver	ILX Lightwave		\$8,500	\$34,000
4	Diode Temperature Controller	ILX Lightwave		\$4,500	\$18,000
4	Pump matching optics	custom		\$6,500	\$26,000
1	RF Spectrum analyzer	Agilent	E4443A	\$57,174	\$57,174
2	Seed laser, LO	New Focus	TLB-6031	\$14,080	\$28,160
1	Lot special resonator optics	TBD		\$20,000	\$20,000
1	Telescope	Optical Guidance	RC14.5-EM500	\$40,500	\$40,500
1	Video Camera	Iconix	RH-1	\$7,595	\$7,595
1	Video Lens	Canon	HJ40X10B	\$66,890	\$66,890
1	Pan-tilt mount	JVC	PTF180LDCC2	\$11,015	\$11,015
2	EO Modulator	New Focus	4853	\$5,200	\$10,400
2	Modulator Driver	New Focus	3211	\$3,135	\$6,270
1	RF Signal generator	Agilent	N9310A	\$7,546	\$7,546
1	High speed gimbal	Aerotech	AOM360-40D	\$144,000	\$144,000
1	Controls for gimbal	Aerotech	Budgetary	\$20,000	\$20,000
2	Laser Crystals	Scientific Materials		\$1,230	\$2,460
					\$692,010

Total FY2010 Direct Material Costs

CY2010 - Plasma Shield - Eye-safe Laser Energy Scaleup	\$319,080
CY2011 - DESIL Active Laser Surveillance	\$692,010
TOTAL	\$ 1,011,090
TOTAL per CY	\$ 505,545

FY2010 APPROPRIATIONS REQUEST FORM

REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

GENERAL INFORMATION

Organization making request: Stellar Photonics, LLC **Federal Tax Status:** (i.e. 501(c)3) For Profit

Address: 14797 NE 95th Street

City: Redmond

State: WA

ZIP Code: 98052

Point of Contact(POC): W. Alexander Long

Phone: 206-979-5511

Email: wlong@sphotonics.com

Address: 218 Main Street, #271

City: Kirkland

State: WA

ZIP Code: 98033

DC Representation (if any): Troy Fuhriman

Phone: 718-362-0276

Email: tfuhriman@sphotonics.com

Address: 3918 Avenue P, #1

City: Brooklyn

State: NY

ZIP Code: 11234

PROJECT/PROGRAM INFORMATION

PROJECT TITLE: Dynamic Eye-Safe Imaging Laser (DESIL)

Prioritized: 1 of 1 total requests for your organization

Appropriations Bill: (Please check)

☐ Agriculture

☐ Commerce, Justice, Science

☒ Defense

☐ Energy and Water

☐ Interior and Environment

☐ State, Foreign Operations

☐ Labor, Health and Human Services, and Education

☐ Military Construction, Veterans' Administration

☐ Homeland Security

☐ Transportation, Housing and Urban Development

☐ Financial Services

☐ Legislative Branch

Agency/Bureau (i.e. FBI; Corps of Engineers; US Navy; ARS, etc.): US Marine Corps: Joint Non-Lethal Weapons Directorate (JNLWD)

Account (i.e. Buildings and Facilities, Aviation Safety; Capital Improvements, etc): RDT&E

Amount requested for FY2010: \$ 3,000,000

Total cost of project: \$ 8,000,000

Minimum amount of FY2010 funding needed to begin or sustain this project: \$ 2,000,000

Is this program authorized? ☐ YES ☒ NO **If YES, bill number:** **Year:**

Is this program funded in the President's FY10 budget request? ☐ YES ☒ NO **If YES, amount:** \$

Anticipated total future requests: \$ 5,000,000 **Over the next** 3 **years**

Local, state and/or private funding sources: Stellar Photonics, LLC

Total Amount: \$ 250,000 **Over the next** 2 **years**

Other sources of Federal funding: Army

Total Amount: \$ 750,000 **Over the next** 1 **years** (Under Currently Program Funding)

Federal Agency Sponsor or Program Manager: David B. Law, CIV, Technology Division Chief

Office: USMC - Joint Non-Lethal Weapons Directorate (JNLWD)

Phone Number: 703-432-0900, 703-784-3178 (F), David.b.law1@usmc.mil

Other agency advocate (if any): US Army, Keith Braun, Program Manager

Office: US ARMY - ARDEC , Picatinny Arsenal, NJ

FY2010 APPROPRIATIONS REQUEST FORM

REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

Phone Number: 973-724-7072

Are you requesting this through any other office(s): YES

If yes, which office(s):

Jay Inslee, (D-WA 1st), David Bahar & Beth Osborne, 202-225-6311 (Sharmila Swenson, 206-61-3959)

Norm Dicks, (D-WA 6th), Andy DeMott & Marc Hone, 202-225-3459 (Ryan Dumm, 253-593-6536)

Rick Larsen, (D-WA 2nd), Mark Middaugh, 202-225-2605

Adam Smith, (D-WA 9th), Brian Garrett & Kelsey Knowles, 202-225-8901 (Roel van der Lugt, 253-896-3775)

Cathy McMorris-Rodgers, (R-WA 5th), Aimee Henneke, 202-225-2006

Patty Murray, (D-WA), Sheila Babb, Deputy State Director, 206-553-5545

PROJECT FUNDING HISTORY (FROM CURRENT YEAR BACKWARD)

FISCAL YEAR	PRESIDENT'S REQUEST	ORGANIZATION'S REQUEST	FUNDING AMOUNT	APPROPRIATIONS BILL	ACCOUNT, SUBACCOUNT
2009	N/A	\$ 2,000,000	0		
2008	N/A	\$ 8,000,000	0		
2007	N/A	\$ 8,000,000	\$ 2,700,000	HR5631	R-1,PE: 0602634A
2006	N/A	\$ 7,500,000	\$ 3,000,000	HR2863	R-1,PE: 0602634A
2005	N/A	\$ 2,000,000	\$ 1,000,000	HR4850	R-1,PE: 0602634A
2005			\$ 263,637	Defense	Army, SBIR Phase II

Executive Summary/Project Description (MAXIMUM 200 Words):

- Please include a discussion of the project's merits, relevance, eligibility, and why it is a valuable use of taxpayer funds.
- Please limit your description to 200 words.
- You may attach additional information, however, please understand that the description provided below will be used for any and all public disclosure requirements.

The purpose of funding is to further fund the existing EYE-SAFE (DESIL, Dynamic Eye-Safe Imaging Laser) laser research program and improve the capabilities to the non-lethal Plasma Acoustic Shield System (PASS) in terms of: making it Eye-safer, increase the range, higher repetitions and coverage area. The PASS system will project out and be able to visualize a wall of laser plasma light and can be use at check points (riot control) to visually intimidate the opponents from entering a restricted area.

Stellar will also seek to commercialize DESIL's many dual-use applications: from Counter-Threat Sensor jamming, maritime laser radar (LIDAR) surveillance, laser spectrum stealth, to skin cancer imaging.

Stellar will use funds to maintain its current 20 job positions and hire 4 new positions in laser physics and engineering. Funding will enable Stellar to purchase additional laser equipment and parts to develop the new compact Eye-Safe Imaging Laser system!

BACKGROUND: The United States is a signer to the United Nations' convention on prohibiting the use of lasers that can lead to permanent blinding in 1995. Although with its exceptions, many counter sensory laser programs were cancelled due to fears of violation. Now, 14 years later, technology has advanced to where the development of a fieldable EYE-SAFE laser is possible.

FY2010 APPROPRIATIONS REQUEST FORM

REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

Justification of funding:

- **How does this request fit within the identified bill and account (cite specific precedents and overall purpose of account)?**

The purpose of the "Joint Non-Lethal Weapons Technology Development" account is as its title states; to further investigate and invest in new non-lethal weapons technology developments.

Stellar Photonics' Dynamic Eye-Safe Imaging Laser (DESIL) fits hand-in-glove to the bill and account, as the DESIL technology developments will result in a new class of lasers that are Eye-Safe, and when deployed, complies with the United Nations' ban on the use of blinding laser weapon systems in the battle space. Please see attached Letter of Support from the JNLWD program office!

- **How many jobs could this project create and how will it benefit Washington's 8th Congressional District?**

COMMUNITY IMPACT:

- **Jobs Maintained:** 20
- **New Jobs to be Created:** 4
- **Types of Jobs:** High-Tech, Highly Skilled: PhDs in Physics, Laser, Masters in Engineering, Electric Engineering, Mechanical Engineering, Drafting and Design, marketing, business development, and accounting.
- **Location: Redmond:** 13+4
- **Location: Monroe:** 5
- **Location: Issaquah:** 2
- **Direct:** 15 out 20 (75%)
- **Indirect:** 5 out 20 (25%)

Continued funding of the Dynamic Eye-Safe Imaging Laser (DESIL) project will benefit the local communities in both King and Snohomish county in Washington State by maintaining existing high-tech and cutting edge laser research and development jobs (Ph.Ds, MA Engineering, entry level physicists, electrical engineering and non-technical workers as well) and as well as generate new design and manufacturing jobs as the various DESIL EYE-SAFE Laser technology applications develops and becomes commercialized.

Specific and commons amongst the high-tech laser physics research communities are various small businesses between 5 to 30 employees, whom provides consulting, systems development and small scale manufacturing that are vital to the health of the local communities and defense industry. Not only do these small engineering companies provide cutting edge innovations that channels to larger regional and national companies, such as; Boeing, Lockheed Martin and Raytheon, they also provide great apprenticeship opportunities to those students who seeks to enter into these high-tech and highly skilled fields.

FY2010 APPROPRIATIONS REQUEST FORM

REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

MILITARY IMPACT:

The DESIL EYE-SAFE family of laser technologies and applications will enable the military the use of lasers in various fields and applications without worrying about potential eye damages to the users/operators, and collateral damages to civilians/non-warfighters from reflections and or direct exposures.

By operating in the EYE-SAFE laser wavelength and spectrum, the DESIL technology allows the military to operate their desired laser systems and applications without being in violation to the United Nations' "Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects" Protocol IV on Blinding Laser Weapons, Vienna, 13th, October 1995.

This specifically bans the use of laser weapons and systems whose purpose is to blind. And in addition, provide the following applications and capabilities, such as, but are not limited to the following: Counter-Threat Sensor Jamming, Eye-Safe Laser Radar (LIDAR) for imaging (i.e.: Maritime surveillance, Meteorological & Geological imaging and analysis, and much more).

- This project is vital to National Defense, Military Capabilities & Readiness
- This project will provide capabilities such as: Stealth, counter-threat sensor, LIDAR surveillance and more
- This project will explore and develop laser technologies in a brand new area
- This project will develop laser technologies with many different applications, from military to medical
- This project will develop put the US in the forefront of EYE-SAFE laser technology developments
- This project will allow the US to compile with UN Convention on laser use, without using the loophole
- This project will both maintain and create new jobs in the high-tech and highly skilled laser physics field
- This project will support the local high tech research & development and manufacturing base
- This project will provide apprenticeship opportunities to students seeking jobs in laser and related fields
- This project has bi-partisan support
- This project has the support from the program office, US Marines, Joint Non-Lethal Weapons Directorate

"The Dynamic Eye-Safe Imaging Laser (DESIL) project will enable various cutting edge laser systems and applications critical to National Defense, while at the same time fully compiling with the United Nations' mandate and convention on prohibitions on the use of laser weapons specifically designed to cause blindness"

- W. Alexander Long, VP, Stellar Photonics, LLC

Specific language proposed for Congressman's request to the subcommittee (if any):

Please use what you think would be best? – thanks!

FY2010 APPROPRIATIONS REQUEST FORM

REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

Is there any other relevant information regarding this request that you would like to share?

PROGRAM SCOPE: This program will develop a complete DESIL EYE-SAFE laser system and then integrated it into the existing Plasma Acoustic Shield System (PASS) laser test vehicle for verification and validation of: counter-threat sensor, laser radar (LIDAR) and stealth capabilities. Depending on the level of funding, Stellar will also seek to collaborate with local universities on skin cancer imaging and detection capabilities.

The received funds will be managed by and through the Marine Corps' Joint Non-Lethal Weapons Directorate (JNLWD) at Quantico. Stellar Photonics will subcontract with the various research and development partners to develop the DESIL Eye-safe laser system. Specific distribution % and Statement of Work (SOW) will be reviewed and approved by the JNLWD at the time of contracting. Monthly Progress Reports (MPR) will be sent to the JNLWD program manager for review and the final proof-of-concept DESIL system demonstrator will be available at the Redmond, WA location for testing and evaluations.

- **Why is this appropriate use of taxpayer funds?**

Funding towards the DESIL eye-safe laser development project will advance the United States in the areas of eye-safe laser development and eye-safe laser spectrum applications. According to the US Marine Corps' Joint Non-Lethal Weapons Directorate (JNLWD), there are only 2 other companies conducting research and development in this area in the US.

This achievable eye-safe laser technology will enable a new generation of laser systems and applications that can be widely used by both the military and the civilian commercial space, without worrying about potential eye-hazards, as most lasers are currently.

The Eye-safeness of the DESIL technology will enable new industrial applications that are not foreseeable with today's laser technology, fostering the creation of new companies and generate new jobs in the near future.

THIS IS NOT A SPECIAL INTEREST BRIDGE BUILDING PROJECT, WE ARE ACTUALLY WORKING IN THE LAB CREATING SOMETHING THAT IS USEFUL AND HAS TREMENDOUS TECHNOLOGICAL VALUE TO BOTH THE MILITARY AND COMMERCIAL SPACE!

- **Why is this project in the federal interest?**

The DESIL project is important to the Federal Government in terms of:

1. This project is vital to National Defense, Military Capabilities & Readiness
2. This project will provide capabilities such as: Stealth, counter-threat sensor, LIDAR surveillance and more
3. This project will explore and develop laser technologies in a brand new area
4. This project will develop laser technologies with many different applications, from military to medical
5. This project will develop put the US in the forefront of EYE-SAFE laser technology developments
6. This project will allow the US to compile with UN Convention on laser use, without using the loophole
7. This project will both maintain and create new jobs in the high-tech and highly skilled laser physics field
8. This project will support the local high tech research & development and manufacturing base

FY2010 APPROPRIATIONS REQUEST FORM

REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

MILITARY ADVANTAGES & NEED:

PLASMA ACOUSTIC SHIELD SYSTEM (PASS): The PASS system is a non-lethal point defense system that can be used at check points or anywhere there is a mixture of civilians and potential combatants. The plasma shield works by projecting the invisible laser beam and generating a non-lethal plasma ball in front of a target. The PASS will be able to generate hundreds of these plasma balls and scan it into a loud, pulsing bright light shield or barrier! The system has highly agile speed-of-light delivery and exceptional accuracy and adjustability. The DESIL system will be integrated into the PASS laser test vehicle to demonstrate the eye-safeness and high repetition rates of this new technology.

COUNTER-THREAT SENSOR: The DESIL EYE-SAFE laser can be used to blind enemy optical sensors in the battle space. Expensive tanks, helicopters and Unmanned Air Vehicles (UAV) are useless if its sensors are blinded and can not see its targets. This effect can be achieved safely in the battle space without violating the UN Convention and give us the necessary edge.

STEALTH: Night Vision systems sees between the wavelength of 650 nano-meters (nm) and 1000 nm, thermo vision systems sees between 3000-5000 & 8000-12000 nm. DESIL emits at 1550 nm, therefore, any military systems using the DESIL wavelength will be invisible on the battle field, systems such as: laser target designators, laser radars (LIDAR) and laser communications.

SEE ATTACHED WHITE PAPER SUMMARY FOR FURTHER DETAILS.

The effectiveness of modern military hardware is highly dependent on its ability to see and sense the opposition, once the optical targeting sensors are blinded and disabled, expensive military equipment becomes useless on the modern battle field.

This application is a continuation of under the Dynamic Pulse Detonation (DPD) program, which have been funded since FY05. The purpose of the overall program is to come up with new and innovative ways to improve and increase the effectiveness of the US Armed Forces on the modern battlefield. Previous successful and ongoing projects includes: Plasma Acoustic Shield System (PASS) for non-lethal area denial, Counter Passive Infrared IED (IRTCM); non-laser based Dazzler systems.

CONTINUE FOR DEFENSE REQUEST ONLY:

What is the name and number of the Program Officer for this request?

David B. Law, CIV, Joint Non-Lethal Weapons Directory (JNLWD)
Technology Division Chief
3097 Range Road, Quantico, VA 22134-5100
David.b.law1@usmc.mil 703-432-0900

Have you contacted the Program Officer? YES

FY2010 APPROPRIATIONS REQUEST FORM
REPRESENTATIVE DAVE REICHERT (WA-08)

(ONE project/program per form)

Appropriations Account: (Please check)

☒ RDT&E ☐ Procurement ☐ O&M ☐ Counter Drugs ☐ Medical

☐ Reserve Equipment ☐ National Guard Equipment ☐ Other (DW, for example)

Service: (Please check)

☐ Army ☐ Army Reserve ☐ Navy ☐ Navy Reserve ☒ Marine Corps ☐ Marine Corps Reserve

☐ Air Force ☐ Air Force Reserve ☐ Intelligence ☐ Army Guard ☐ Air National Guard

Line Item Title: **Joint Non-lethal Weapons Technology Development**

Identification:

R-1/PE # **0603651M** P-1/Line # **21** TIARA/JMIP (Intel Only) _____

Sub-Activity Group (required for Personnel and O&M):

THANK YOU FOR YOUR SUPPORT!!



Team STELLAR

(not everyone is featured in this pic)



King County

Kathy Lambert

Councilmember, District 3

Metropolitan King County Council

March 19, 2009

Congresswoman Cathy McMorris Rodgers
1323 Longworth House Office Bldg.
Washington, D.C. 20515

Dear Representative McMorris Rodgers,

I am writing today in support of Stellar Photonics, LLC, a business located in Redmond, Washington. I have known the principals at Stellar Photonics for many years and can fully support their request for continued funding for the Dynamic Eye-safe Imaging Laser (DESIL) project. I would greatly appreciate your consideration of this project as one of the items that should be included in the FY2010 Department of Defense Appropriations Bill.

Stellar Photonics is a woman owned business creating vital jobs for highly trained scientists and engineers as well as support staff. Additional funding will provide job retention as well as expected expansion.

Stellar Photonics is involved in important research and development for the U.S. military, both Army and Marines JNLWD, which relies solely on being funded by the government. So far Stellar has successfully completed every task requested of them by contract with these agencies and is nearing the final phase of development on their major developmental project. Support for this project is imperative to guarantee continued success needed to assist our troops and protect embassies and provide checkpoints with several new non-lethal weapons available to them.

Stellar Photonics has the facilities and the staff to complete this project successfully.

I urge your support for this measure.

Regards,

Kathy Lambert
Kathy Lambert